

Hildreth (S. P.)

ADDRESS

OF

S. P. HILDRETH, M. D.

PRESIDENT OF THE THIRD

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ADDRESS OF THE PRESIDENT,

Before the third Medical Convention of Ohio.

GENTLEMEN—

In selecting a subject for the address enjoined upon the presiding officer of this Medical Convention, it was thought that one which treated on the climate and early history of diseases in Ohio, at, and soon after its first settlement by the whites, might prove as interesting, if not so instructive, as that of any other; especially to the junior portion of the faculty. My remarks, however, must be chiefly confined to that part of the State which is embraced within the limits of the Ohio Company's purchase, as being best known to the writer.

That we may bring the subject into some tangible form, it will be divided into several heads.

1st. Topography, and primitive aspect of the country on the Ohio river.

2d. Climate and its changes from the effects of cultivation.

3d. Diseases of the aborigines.

4th. Diseases of the first white settlers, and early epidemics.

5th. Treatment of diseases, thirty years since.

6th. Recent Epidemics.

7th. Diseases common to this climate, with the modifications which have taken place from changes in diet, fashions, habits, &c.

8th. Closing remarks, on the privations and pleasures of physicians.

With these numerous items before me, either of which could afford matter for a small volume, I must necessarily be brief on each particular one.

1st. *Topography and primitive aspect of the country on the Ohio river.*

The general face of the region from the mouth of the Scioto river to Pittsburgh, is broken and hilly for many miles back from the Ohio. The hills are not placed in a regular succession of ranges like those which form the chains of mountains in the heads of the Monongahela river, and in various other places, but are without order, and would seem to have been principally formed by the wasting and wearing away of the rocky strata on which they are based, by the action of running water. They vary in height, from one hundred and fifty to three hundred and fifty or four hundred feet. The bottom lands along the borders of the river, are not very low, and are subject to overflow only in high floods. Extensive marshes, or ponds, are unknown in this division of the state. The lands are generally dry, and the larger portion of them will in a few years be under cultivation. At the period of the first settlement of the country by the Ohio Company in the year A. D. 1788, one dense, continuous forest covered this whole region, entirely unbroken by the hand of civilization, except a small tract under the walls of Fort Harmer. The uplands presented a most enchanting appearance to the eye of the hunter or the traveler. No brush-wood then marred the fair beauty of the forest; but the view was extended from hill to hill, amidst the tall shafts of various species of trees without obstruction; while the mingled branches above, afforded no unapt resemblance to the dome of an immense temple. The annual autumnal fires of the Indians, during a long period of time, had destroyed all the shrubs and undergrowth of woody plants, affording the finest hunting grounds; and in their place there had sprung up the Buffalo-clover (*Trifolium reflexum*) and the wild Pea-vine (*Phaseolus Ohioensis*) with various other indigenous plants and grasses, supplying the most luxuriant and unbounded pastures to the immense herds of deer and buffalo which tenanted the thousand hills on the borders of the Ohio. The wild turkey, in countless flocks, roamed at large amidst these beautiful forests, feasting on the acorns, chestnuts, and fruit of the beech, which the bountiful hand of the Creator had furnished in quantities adequate to the wants of all his creatures. The rivers were filled with delicious fish, in such abundance that at certain seasons of the year the smaller tributary streams might be said to have been "alive with them," and in the language of an old and early settler, "the hook could hardly be dropped into the water without falling on the back of a fish." How abundantly had the Father of all provided for his children! and nothing but that love of war and bloodshed, which was so assiduously cultivated by the Indian, combined with the na-

tural depravity of the human heart, could have prevented the aboriginal owners of this beautiful country from having been amongst the happiest of mankind.

On the uplands, the principal growth of forest trees consisted of the various species of oak, poplar, hickory, and chestnut. In some districts were found extensive woods of yellow pine (*Pinus mitis*) and in tracts remote from the older settlements it is yet to be found in abundance. On the bottoms, or alluvions, and on the north sides of rich hills, the beech, sugar tree, ash, maple, and elm were the prevailing growth; while the sycamore (*Platanus occidentalis*) lined the borders of the rivers and creeks, where its roots could be refreshed by the running stream. Along these streams the red man pushed his light canoe, rejoicing in the wild freedom of the forest, and happily unconscious of the approaching fate which threatened his race, and was soon to banish all but his name from the face of the earth.

2d. *Climate, and its changes from the effects of cultivation.*

The region of country chiefly embraced in these remarks, lies between the thirty-eighth and fortieth degrees of north latitude; and three and sixth degrees of west longitude from Washington city. Along the borders of the Ohio river, the climate is supposed to be more mild, than in the same parallel east of the Alleghany Mountains. This difference may in part be occasioned by the prevalence of southerly and south-westerly winds, and from the circumstance of there being no very high lands between us and the Gulf of Mexico, to reduce their temperature. The soil, also, being of an argillaceous and loamy quality, radiates less rapidly the imbibed caloric, than a gravelly and rocky surface of country. The annual temperature at the mouth of the Muskingum river, from the mean of twenty years observation, is found to be about 53° of Farenheit. The temperature of the water in the deepest wells corresponds very nearly with that of the thermometer. Our climate is very variable, and subject to sudden and great changes. These extremes, however, are of short duration; very cold or very hot weather continuing for a few days only. The mercury has been known to rise to 99° in summer, and sink to 22° below zero in winter, making a range of 121°. On Tuesday, the 3d of February, 1818, snow fell to the depth of 26 inches, and lay on the ground for nearly three weeks. On the tenth of that month, at half past six in the morning, the mercury sunk to 22° below zero. On the ninth, it was 20° below; but by the twelfth of the month the weather was quite mild. On these two cold mornings, a thick vapor, like steam from boiling water, rose from the Ohio; but soon con-

gealing, fell in large flakes of snow all over the low lands near the river, affording the novel spectacle of a shower of snow from a clear and cloudless sky. All the peach trees, except in some sheltered spot, were killed down to the surface of the snow, and many shrubs and trees of the forest perished from the effects of this unusual degree of cold. In common winters the mercury does not fall much below zero, and seldom so low as to destroy the embryo buds of fruit trees. As the country becomes still more cleared of its forests, there is no doubt that it will be subject to greater extremes of heat and cold, with sudden transitions of temperature, than it was formerly when covered with trees; but the mean annual heat will be greater than formerly. Had we an ocean on the west, and north-west, with no intermediate ranges of mountains, it is probable that cultivation would greatly ameliorate our winters as it has done in Europe; but the Rocky mountains and high prairie country on the west will ever render us liable to be visited with dry, cold, westerly, and north-westerly winds, during the winter and spring months, similar to those of China, blowing over the ranges of the Caucasus, and elevated plains of northern Tartary.

Another serious difficulty we have reason to fear will follow, as the effect of cutting away our forests—and that is, excessive drouths in summer. The regularity and frequency of our summer rains will in a manner cease, and the principal falls will be in the spring and autumn. This has been the fact in other countries remote from the ocean, from the same cause, and must be so here; more especially in a flat district, and removed from mountain ranges, which act as conductors in drawing water from the clouds. Our rivers and creeks already feel the effects of cultivation, and afford a less uniform and steady flow of water in the summer months, than they formerly did.

From an average of twenty years, I find that there are seventy six days in each year, on which the mercury rises above eighty degrees, and seventy-three days on which it falls below thirty, both numbers included. This distribution, however, varies very greatly in different years, as will be seen in the following table, embracing a period of twenty-one years. It also exhibits the amount of rain and melted snow, the mean temperature of each year, with the highest and lowest grades of heat, and the mean of the summer and winter months.

The table is deficient in portions of the years 1823 and 1824. Jas. Wood, Esq. late register in the United States' land office in Marietta, furnished the facts to 1823, after which period they are the result of my own observations. Although this table occupies but a small space, yet in it we have embodied the products of not less than twenty-five thousand observations on the temperature and rains. Those on the winds and barometer, amounting to nearly as many more, are not here exhibited.

▲ CONDENSED METEOROLOGICAL TABLE,

From the year 1818 to 1838.

Year	No 1	No 2	No 3	No 4	No 5	No 6	No 7	No 8
1818		51		74.00	-22	99		50.92
1819	54	68	38.22	74.33	13	90	55.62	36.30
1820	58	51	35.50	73.70	0	90	53.68	39.71
1821	82	50	32.78	73.80	-20	90	53.14	43.32
1822	66	54	31.19	75.90	- 2	86	54.87	43.38
1823			29.10		- 7			*40.00
1824		64		75.80	14	94		
1825	52	96	36.32		- 6	94		
1826	68	111	32.25	72.51	- 1	95	54.00	41.60
1827	55	98	33.30	76.67	- 2	95	54.92	41.48
1828	55	84	42.97	72.06	10	94	55.22	49.50
1829	87	81	32.88	71.49	2	92	52.38	39.52
1830	61	91	36.57	72.88	- 5	94	54.93	37.26
1831	99	72	30.75	71.44	-10	90	51.00	53.54
1832	78	70	29.30	69.31	- 9	92	52.42	48.33
1833	76	85	36.00	68.37	6	95	54.56	40.37
1834	75	100	35.83	72.42	0	95	52.40	34.66
1835	82	57	31.95	68.90	-15	89	50.65	42.46
1836	107	81	29.84	71.55	-18	88	50.03	36.09
1837	107	63	31.13	69.25	4	89	51.57	43.75
1838	78	102	30.42	74.23	-10	96	50.62	35.48

Column No. 1, indicates the number of days in each year on which the mercury fell to and below 30°; No. 2, the number of days on which it rose above 80°; No. 3, the mean temperature of the winter months; No. 4, the mean of the summer months; No. 5, the greatest degree of cold; No. 6, the greatest heat; No. 7, the mean temperature of the year; No. 8, the amount of rain and melted snow, in inches and hundredths—the mean amount of which for seventeen years is forty-two inches and fifty hundredths. The hottest part of the day in summer is between three and four o'clock, P. M.; the coolest just before sun-rise. February is usually the coldest month, although our winters vary much in this respect, it sometimes being December, and then again January. In the former month we have the greatest depressions of temperature, probably from there being in that month the deepest falls of snow. The mean temperature of

* Eight months, or to September.

Feb. 1838, was the lowest for twenty years past. In common winters our snows are only a few inches deep, and lie on the ground but a short time. The greatest snow storms are usually accompanied with wind from the northwest. In cold and dry winters our rivers are obstructed, and sometimes closed with ice; but if the winter is wet they remain open and sometimes entirely free from ice; this was the fact in the winter of 1824-5, and also in 1833-4. From the fore part of April to the last of May, in the early settlement of Ohio, thirty and forty years ago, the weather was mild and fine, so that the planting of Indian corn was finished by the 7th of April, that day being for many years a holiday in commemoration of the landing of the forefathers at Marietta—but of late years our springs are much changed in this respect, so that we have some severe frosts as late as May. This was especially the case in May, 1834, when we had hard frosts every morning from the thirteenth to the eighteenth of the month, six months in succession. It had been quite an early spring; all the forest trees were in full leaf, by the latter part of April, and the peach in bloom on the eighth of that month. To show the variations of our seasons and the capricious habits of our climate, the blossoming of the peach tree may be noticed in the different years. In the year 1806, this tree was in bloom at Belleprie, in Washington county, on the twenty-fifth of February, and in 1808, on the twenty-eighth of the same month. In the year 1837, it did not blossom until the twenty-eighth of April, and the apple on the fifth of May—a difference of sixty-two days, or two months. The most usual period, of late years is about the middle of April. In the early settlement of the country it averaged at least two weeks earlier. When the Ohio Company settlers first landed at the mouth of the Muskingum, on the seventh of April, 1788, the grass, pea-vines, and other herbage was knee high on the bottoms and hill sides, so that their cattle and horses found an abundant supply of food. Untimely frosts, did however, sometimes visit the country, at a very early period, but much more rarely than of late years, and probably arises from the greater severity of our winters, occasioned in part by the cutting away of the forests. While the earth was defended from the rays of the summer suns, and protected from the cold blasts of winter by an impenetrable covering of trees, there can be no doubt that our winters were much milder, and summers much cooler than at present. It was more especially observed in the summer nights, which were then so cool as to make a blanket a pleasant and desirable covering to the sleeper.

On the morning of the 16th of June, in the year 1774, I have been informed by Henry Jolly, Esq. that there was a frost in the western country so severe as to kill the leaves of the forest trees, and cut down the Indian corn, in Washington county.

Pa. where he then lived ; but it sprang up again so as to make a crop. It was the year of Dunmore's Indian war.

On the fifth day of May, in the year 1803, there was a fall of snow at Marietta, and over the western country generally, four inches deep, followed by hard frosts on two or three nights. It killed all the fruit ; apples being at that time the size of ounce balls, so that the trees must have bloomed early in April. This event was the more remarkable from its great extent, embracing all the middle and eastern states from Ohio to Maine. It was the year in which I commenced the study of medicine in Andover, Mass., and well recollect the singular appearance of the apple trees, then in full bloom, and loaded with a covering of snow.

It may be noted as a general rule, that very early springs are more liable to late frosts than those which are more backward.

In October and the fore part of November, we have delightful and serene weather, rivalling in the mellow and balmy state of the atmosphere, that of Greece or Italy. It is in fact the most poetic season of the year. The various hues imparted to our forests by the advance of autumn, which daily changes and deepens their rich and gorgeous tints, when seen through the light mists of our "Indian summers," gives a charming and romantic view to our landscapes, which few portions of the world can equal, and none surpass.

The mean heat of August is greater than that of any other month ; but the greatest extremes are found in July, and the last of June. On the eleventh and twelfth of July, 1818, the mercury rose to 99° in the shade, and to 138° in the direct rays of the sun. The hottest days are sometimes followed by cool nights, and there are but few days and nights in which the heat is nearly equal, although there has been less variation in this particular, during the summer of 1838, than formerly. The morning is comparatively cool in the hottest season of the year ; probably owing to the humidity of the atmosphere absorbing the free caloric, and descending in dews and fogs ; the latter being confined to the vicinity of water courses. From the great extent of our forests, covering at least three-fourths of the country, the air must necessarily be more moist than in tracts nearly, or wholly denuded of trees. This great abundance of forest trees is doubtless one cause of the greater humidity of the climate in this region of country, than in the same parallels east of the mountains. The quantity of rain which annually falls there varies from twenty-four to thirty-six inches, while here, on an average calculation of seventeen years, the mean amount is forty-two inches and a half, and varying from thirty-four to fifty four inches annually. The humidity of the atmosphere, and long continued heat in summer, acts on the human frame much like a tropical climate, causing languor and a general debility, during the warm months, lessening the muscular powers both

of man and beast, and producing fatigue in performing the same amount of labor, that may be executed with ease in a drier condition of the atmosphere. During continued damp weather, with the temperature through the day from 85° to 90° , the air is like a vapor bath, and opens the pores of the skin nearly as freely. This condition of the atmosphere, also diminishes its density, as is indicated by the settling of the mercurial column in the barometer, and also adds to the difficulties of the invalid, especially if he is predisposed to be asthmatic.

As to the general range of this instrument, I do not know that it sinks any lower at the same elevation above tide water, in the valley of the Ohio, than it does on the east side of the Alleghany Mountains, although this has been formerly intimated. The mouth of the Muskingum is supposed to be five hundred and seventy feet above tide water, and would give my barometer an elevation of about six hundred and twenty feet above the level of the ocean. Its mean annual height is about twenty-nine inches and fifty hundredths; rising in clear cold weather, with the wind from the N. W. though rarely, to thirty inches, and in great changes sinking to twenty-eight inches and sixty-five hundredths. The greatest range is during the winter months, and the least in summer—often standing for several days in succession, without varying the fiftieth part of an inch. In winter the fluctuations are daily, and sometimes almost hourly. Our seasons vary considerably as to the distribution and quality of rain; some being more than usually wet, and others uncommonly dry, but seldom or never so much so in either extreme as to destroy all the hopes of the farmer. More injury is usually experienced from too much, than from too little rain. In July and August, 1838, the country, however, suffered more from drouth than at any former period. The larger portion of our rain falls in moderate showers, and we are seldom visited by those terrible tornadoes, which fall on more southern regions. Accompanying the thunder storms of summer, we sometimes have heavy rains, especially at the solstice in June. This was peculiarly remarkable in the summer of 1837, by which great damage was done to the crops, from the overflowing of the alluvions along the small creeks.

Hail storms are more common in April and May, than at any other periods. They are rare occurrences, and much less destructive to crops than in more mountainous regions.

Those terrible electric phenomena, called "Tornadoes," seldom visit this portion of Ohio. For the last thirty years not one has traversed this part of the State, with the exception of a very limited one in Athens County, in February 1835 or 6; and from the rarity of those unerring marks left in their train for many subsequent years, in the wide furrows of upturned forest trees, we are led to conclude that they are uncommon in this region of country.

During periods of drouth, it has been observed, that when a cloud is formed and charged with rain, it proceeds in the direction of the larger streams of water, pouring out its humid contents on the bottoms and lands adjacent, but withholding them from the arid and more needy uplands.

During the months of February, April, June and July, there usually falls the greatest amount of rain, and in January, August, September, and October, the least; although there are exceptions to this rule in some years.

The prevailing winds are from the south, south-west and west, but also blowing for many days in the winter from the north, north-west, and east. The course of the winds regulates the temperature of the year, and the amount of rain—westerly and northerly winds bring cold and drouth; while southerly and south-easterly winds bring warmth and rain. By noticing the course of the winds in different years we arrive at the genuine cause of the variations in temperature. This is more especially true of the winter and spring months. Westerly and northerly winds being invariably attended with cold, backward and dry springs; while early ones are ever accompanied by southerly breezes and plenteous showers of rain. Our westerly and northerly winds traverse elevated and dry regions of country, deficient both in caloric and moisture, the two main principles in the support of vegetable life; while southerly breezes come changed with humidity and warmth from the Gulf of Mexico and the valley of the lower Mississippi, bringing in their train the charms of Flora, and the rich bounties of Ceres. With the early vernal zephyrs of the south, the annual northerly migrations of the feathered race commences, along the westerly base of the Appalachian and Cumberland ranges of mountains, and up the valleys of the easterly tributaries of the Mississippi. Sometimes their journeys are begun too early, as in the years 1816 and in 1834; when thousands of the scarlet Tanager, Baltimore Oriole, Humming birds, &c. perished by a sudden transition of temperature, from the warmth of summer to the frosts of winter.

After rain in summer, the wind often blows from the north, producing a refreshing coolness and imparting vigor to the enfeebled frame. I have noticed that our more healthy seasons are attended with northly winds after showers; and that in the more sickly they blow from the south. This was especially the fact in the great epidemics of 1822 and 1823. Should the summer months prove to be very wet and hot, fevers are more common; if very dry and warm, dysentery and diarrheas predominate. Sudden changes from heat to cold, in August and September, often produce disease, when earlier in the season, before the body is debilitated by the heat of summer, the change is borne without any apparent harm. December, May, and

June are the most healthy months ; and February, March, August, and September, the most liable to sickness.

3d. Diseases of the Aborigines of this Country.

From the foregoing description of the topography and climate, which probably has not changed materially since its first occupation by man, some estimate may be formed of the diseases which would be most incident to the inhabitants. That portion of the country which lies amongst the hilly and broken districts of the State, we should judge would be very healthy and free from miasmatic diseases ; while tracts bordering on the large rivers, with low, swampy grounds and wet prairies, as on the upper portions of the Scioto and Upper Sandusky, would be liable to malaria and its various remittant disorders. This, from what I can learn from persons who had been prisoners with the Indians, and spent several years amongst them, was indeed the fact. Although their red skins, and more hardy frames, would be some protection from disease, yet we find that the tribes which lived at Sandusky, and along the Scioto river, were afflicted at certain seasons with remittant and intermittant fevers, dysentery, and diarrhea. The larger portion of the sick, however, was amongst the children, and those whose bodies had not been hardened by exercise and exposures. It does not appear that these diseases were very fatal, or often prevailed as extensive epidemics, as they have done amongst the whites since their taking possession of the country.

Loskeil, in his history of the Moravian Missions in North-America, speaks of a fatal disease which prevailed amongst the Indians on the waters of the Big Beaver and the adjacent country, in the years 1770 and 1771, and which, from his description, must have been, most probably, a fever similar to *Pneumonia typhoides*. He also speaks of measles and small-pox as prevailing, so that this epidemic could not have been either of these diseases. As it broke out in the vicinity of the Moravian mission, many of the heathen Indians thought it was sent amongst them as a punishment by the "Great Spirit," on account of their forsaking the religion and customs of their forefathers. It prevailed for two or more years.

From history we learn that the aboriginal inhabitants of this continent were not exempt from those destructive epidemics which sometimes ravage other portions of the globe, even before the white man came amongst them ; witness the mortal disease which had well nigh depopulated the district now called New England, the year before the "forefathers" landed at Plymouth. The Massachusetts tribe of Indians were said to have been reduced from thirty thousand warriors to three hundred. This disorder, from the description of the Indians, was a contagious, pestilential, putrid fever, similar to the plague, as it was attended with buboes—some of the Indians who recovered showing the scars of the abscesses.

In October, 1763, a fever broke out amongst the Indians on the island of Nantucket, and out of about two hundred and sixty five persons attacked, only fifteen recovered. It is remarked that not any of the English inhabitants took the disease.

Many of the mounds and tumuli of the west, which are filled with human bones of all ages and sexes, in nearly the same state of decomposition, would seem to indicate that life had been destroyed by disease, rather than war; as in that case the bodies would have been chiefly those of adult males, and not a mixture of all ages—as it is not to be supposed that their destroyers would have taken the trouble of their burial, but have left them scattered over the ground on the spots where they fell.

Whether the small-pox, which seems to have been, and still continues to be, one of the most fatal diseases that ever visited the red man, was known amongst them prior to the discovery of America, remains in doubt; although I see no good reason why it should not have been, for they seem to be more susceptible to its attacks than the white man. Amongst us it is supposed sometimes to commence like other diseases, in a particular individual or family, and afterwards spread by contagion.

The measles has also been a well known disease amongst the Indians; but is not usually a very fatal one. Their treatment for this disease and the small-pox, appears to have been nearly the same—which was, by placing the patient in a vapor bath, formed by pouring water over hot stones, and covering him with a blanket spread over boughs, beneath which he was placed. The operation was assisted by drinking freely of a decoction of Hemlock spruce, (*Abies Canadensis*), of the twigs of yellow pine, (*Pinus mitis*), which ever happened to be nearest the camp or village. After sweating profusely for some time he was plunged into cold water. This treatment usually proved fatal in cases of small-pox, but might be useful in a common intermittant, or an attack of inflammatory fever.

Rheumatism is another disease to which they were very subject, especially the females, who performed all the drudgery, and carried heavy burthens for long distances on their backs. They were in fact the slaves of their husbands, transacting all their agricultural labors besides their inn-door work. In sickness some old woman acted as nurse and physician, prescribing such simple remedies as their observation, in a long course of ages, handed down by tradition, had found to be useful. Amongst these, a decoction of Butter-nut bark, (*Juglans cathartica*), was often used as a purge. The wild Ipecac, *Gillenia trifoliata* of the hills, with Indian sage, *Eupatorium perfoliatum*, were employed as emetics. The latter plant, with the roots of the Indian hemp, *asclepias decumbens*, was a common and very efficacious remedy for diarrhea and dysentery, complaints from which they suffered in the summer months more than from any other, es-

pecially the children. These were often brought on by changes in diet. During the winter their food was principally venison, buffalo and bear meat, with hominy and various other dishes of Indian corn; and while they had it in plenty they enjoyed good health. In the spring and summer their food consisted chiefly of fish, and in scarce seasons they made use of fresh water clams and muscles, which when the streams were low covered the bottoms of the creeks and rivers in thousands.— These were usually roasted in the fire, as the immense heaps of *calcined* shells now seen buried in and along the banks of the Ohio, bear witness to this day. The latter article, eaten without salt, or other condiment, would be very likely to induce bowel complaints.

When the Indian corn was first ready for boiling, the children ate voraciously of that, and being a new article of diet, in August and September would also bring on diarrhea, which proved more fatal to them than their other diseases. This complaint, however, they often cured with a decoction of white oak bark, and various astringent roots, especially alum root, *Geranium maculatum*.

From their using so little salt in their food, the young children often suffered from worms. For this difficulty, hickory ashes, mixed in a little honey, was a common and very effectual remedy.

Consumption and insanity were rare diseases amongst the aborigines, and seem to be chiefly confined to man in a civilized state. The more refined and intellectual his condition, the more common we find the latter complaint.

Dropsy sometimes followed long continued cases of intermittent fever, but was not frequent, especially among the tribes remote from the white traders, where they could not have access to whiskey. This inebriating and poisonous beverage, so grateful to the vitiated taste of the savage, has been the source of more diseases than all other causes combined.

Their wounds were usually treated successfully by the aid of suction, and the application of emollients, such as slippery elm bark, and a decoction of beech leaves. These simple remedies, with the aid of a sound constitution, soon healed the most dangerous and extensive injuries from the knife, tomahawk, or rifle shot.

Extreme old age amongst the Indians is at this day a rare occurrence; although when the whites first came amongst them it was not uncommon to see persons who had every appearance of being at least one hundred years old. There are several reasons why life should be more brief with them, than amongst civilized nations. Their exposures in hunting, and their almost continual wars, cut off a large portion of the male population before they reached sixty years of age; and after their intercourse with

the whites, life was held by a still more uncertain tenure, from their nearly universal attachment to the "*fire water*"—a very apt and appropriate name which they had given to rum and whiskey. From their rambling and desultory habits, no adequate quantity of food was laid up for their support, at those seasons when deer and buffalo were scarce ; for this reason they suffered extremely in some years from famine. At these periods the older and more helpless portion of the tribe would be sacrificed as useless encumbrances—for extreme necessity knows no law either of right or affection, especially while man is in a rude and barbarous state.

It is melancholy to think of the fate which awaits the red man, the native lord and owner of the vast domain now occupied by these United States ! From time immemorial, his ancestors in a long line of descent, had paddled the light canoe along its hundred rivers, or followed the chase amidst its thousand hills, free as the air they breathed. The white man came, and in the brief space of two hundred years, numerous tribes and powerful nations have perished so entirely that nothing now remains of them but the name. The glance of his eye was death, and the breath of civilization was poisonous to the atmosphere of the savage. There has doubtless been an overruling Providence in this, and the whole conducted by the unerring laws of our nature—one of which is, that ignorance and the barbarian state of society must give way before knowledge, civilization, and the arts, as the darkness of night is dispelled before the morning sun. It is doubtless for the better good of mankind that these rich and fertile valleys, which could at most support but a scanty population of Indians, should be occupied by millions of a christian people, where villages and cities could be built, and instead of the yell and the war-whoop of the savage, songs of praise and adoration ascend from a thousand temples erected to the honor and praise of Almighty God. Yet, notwithstanding all this real, and much apparent good, we cannot but still deplore the fate of this interesting people ; and ever deprecate the injustice and cruelty of the whites towards this gallant and much injured race of men.

4th. Diseases of the early Settlers of Ohio.

When the Ohio Company first took possession of the country along the borders of the Ohio and Muskingum rivers, the whole face of the earth was covered with a thick growth of forest trees, which defended it from the sultry heats of summer, and moderated the rigors of winter. Yet, from the history of our climate as detailed in the former part of this discourse, we may suppose they suffered occasionally from the diseases common to both the tropical and the arctic regions. They sometimes were attacked with malignant remittants in the summer, and pneumonias and pleurisys in the winter, but no serious epidemics ap-

peared until partial openings had been made in the primeval forests, and the wet low grounds exposed to the action of a summer sun. Half-way business in cultivating and civilizing a country, is like half-way work in every other affair, often productive of evil. Accordingly we find that a partially cultivated region is more sickly than one which is either totally covered with forests, or in a state of complete redemption. While it is shaded with trees the swamps and wet low grounds, which more or less abound in all new countries, especially on the water courses, remain during the summer filled with water, and quite harmless; but as soon as the trees are cut away and their trunks and branches left to moulder and decay in the heats of summer, the "*Hydra*" of the ancients is let loose, and all the arrows of *Apollo* can hardly slay the monster. The partially evaporated waters and reeking shores of the swamps, exhale a sickly malaria which the morning fogs and the noon-day breezes waft to the cabin of the new settler, and his humble but cheerful hearth is soon clouded with sickness, sorrow, and pain. The hunters and wild borderers who preceded the actual settler, generally suffered much less from sickness. Their cabins were placed immediately on the banks of some river or creek. The clearing around their huts was generally very small—seldom more than an acre—a large portion of which would be shaded by the tall trees. Like the savages around them, the largest share of their time was spent in the forest, and the support of their families depended altogether on fishing and the fruits of the chase. Their diseases were few and simple. Since the first settlement of the country many of the disorders have changed their type and character. From the year 1788, the period of the first improvements in Ohio, to the year 1807, the date of the first great epidemic, a large proportion of the diseases originated in exposures to wet, cold, hunger, and fatigue, and were generally of an inflammatory type, such as Rheumatisms, Pleurisys, Pneumonias, Scarlatina, and Small-pox. Ophthalmias were also common. For the first nine years, the inhabitants made but little progress in clearing their lands of the huge forest trees which covered the rich alluvions on the Ohio and Muskingum rivers. The greater portion of their time and strength was occupied in building stockaded garrisons and blockhouses, and watching the movements of the Indians. Sometimes their lives were in danger from famine, and at others from the rifle and tomahawk of the savage.

In the spring and summer of the year 1790, the inhabitants of Washington County suffered severely from want of wholesome food. Very little land had as yet been cleared, and a severe and untimely frost in September of the preceding year, having destroyed or greatly damaged the crops of corn on the Monongahela, where they chiefly looked for their bread stuff.

the settlements were on the brink of being ruined and broken up. The Indian war began the following year, and they still continued to suffer from want of food. The savages killed and drove away many of their cattle; and, continually watching in the vicinity of their garrisons, prevented the hunters from obtaining a supply of venison, which at that day were more numerous than the domestic cattle at this. In this season of want, I have heard some of our present inhabitants, who were then children, relate with what anxiety they watched from day to day the tardy growth of the corn, beans and squashes, and with what rapture they partook of the first meal prepared from vegetables of their own raising.

In this period of time, namely, from 1790 to 1795, while confined in their garrisons, the settlements at Belleprie suffered much from small-pox and scarlatina. Of the latter disease many children died. Some families lost three or four. It was of a malignant character and very fatal. The small-pox was rendered in a manner harmless by inoculation. Fevers of the remitting type were rarely seen, so long as the country was wholly covered with forests.

To counteract the depressing effects of want and anxiety on the mind as well as the body, all kinds of athletic amusements were encouraged by the colonists amongst the young people, especially foot races, games at ball, and dancing.

Some of the young females had become so habituated to danger that nothing pleased them better than a sudden alarm that the Indians were about to attack them, as the confusion and bustle of such a crisis, gave a different train to their thoughts, and a relief to the sameness of a garrison life. This volatility of spirits I have no doubt preserved the early inhabitants from many attacks of disease and death. The leaders of the colonists were generally officers and soldiers who had served during the revolutionary war, familiar with danger and the structure of the human mind.

Peace being again restored to the frontiers in 1795, by the victory of Gen. Wayne over the Indians, the colonists began soon after to sally forth from their garrisons, and, scattering over the face of the country, took possession of the wild or partially cleared lands which had fallen to their lots, before the breaking out of the war. In a few years extensive clearings were made, and large tracts laid open to the influence of the sun. Mill-dams were built, and abundant sources for the origin of intermitting and remitting fevers created in the half cleared lands, undrained swamps, decaying timber and weeds of the most luxuriant growth. All these, combined with the heats of summer, began to produce disease, and as autumn approached many pale faces were seen amongst these hardy adventurers. The disease was, however, seldom fatal; and a few simple remedies, with a more

plentiful and nourishing diet, aided by the invigorating breezes of winter soon restored their strength.

Malignant fever at Gallipolis in the year 1796.—This town was settled by a company of emigrants from France, in the year 1790. They had bought and paid for lands in their own country, from Joel Barlow, the agent of the "*Scioto Land Company*," which, failing to close its contract with the Congress of the United States for a large tract of wilderness lying between the Scioto river and that of the Ohio Company's purchase, could not fulfil the agreement with these men; and they were left in a strange land, without a home, and without the means of purchasing one, as their journey and payments to the Scioto Company had exhausted their money. With want, disappointment, and the Indians to contend with for several years, sickness and death would naturally fall upon them. During the Indian war, which broke out on their arrival, they were confined to their garrison and could do but little towards clearing the lands on which they had been permitted to settle. Within the bounds of their village were numerous small ponds of water and wet low grounds, partially cleared and covered with weeds and decaying wood from the fallen trees. In the summer of 1796 a bilious remitting fever broke out which prostrated nearly the entire population and caused a number of deaths. Amongst them was a cousin of the writer of this address, who had early visited the west, and was engaged in the fur trade.

Andrew Ellicot, a celebrated engineer and surveyor, in a voyage down the Ohio river, landed there in November of that year. The following extract from his journal, is copied from the fourth volume of the Medical Repository, and is the only account of this sickness which I have been able to procure:

"Arrived at Gallipolis about eleven o'clock in the morning. The village is a few miles below the mouth of the Great Kenhaway, on the west side of the Ohio river, and situated on a high bank. It is inhabited by a number of miserable French families. Many of the inhabitants this season fell victims to the *yellow fever*. The mortal cases were generally attended with *black vomiting*. This disorder certainly originated in the town, and in all probability from an unusual quantity of animal and vegetable putrefaction in a number of small ponds and marshes within the village."

As this visit took place at a period when the yellow fever prevailed as an epidemic in many of our commercial cities, and great disputes were carried on amongst the medical men, as to its contagious or non-contagious nature, he goes on further to state, "The fever could not have been taken there from the Atlantic states, as my boat was the first that descended the river after the fall of the water in the spring; neither could it have been taken from New-Orleans, as there is no communication at

that season of the year, up the river. Moreover, the distance is so great that a boat would not have time to ascend the river after the disorder appeared that year in New-Orleans, before the winter would set in." From this we learn that the fever was of local origin, and also that it took four months to perform a voyage from New-Orleans, which is now accomplished in ten or twelve days.

The next serious sickness, in point of time, took place in the Scioto valley.

Epidemic fever at Chillicothe, and the valley of the Scioto river, in the years 1800 and 1801; described by Dr. Harrison in the 10th volume of the Medical Repository.

The town of Chillicothe was first settled in the year 1796, under the auspices of Gen. Massie; and remained healthy, with the exception of slight intermittents to the year 1800. The summer of this year, until about the middle of August was dry, and the inhabitants tolerably healthy. Near the middle of this month, a heavy rain filled the streams so as to overflow their banks. The water was of the color of the ley of wood ashes, and emitted a nauseating smell. The country was new, and the cultivated lands but partially cleared. In a few days after this rise of the river, a large proportion of the inhabitants of the town fell sick with bilious fever, generally of the remitting type, and of great severity. About the same time a similar fever appeared in all the principal settlements in the valley of the Scioto. Several, he says, turned yellow after death, and exhibited early marks of putrescency. The fever abated in October. In the following winter there was very little snow, but much rain, and the spring of 1801 was unusually wet; the streams overflowed their banks and inundated the bottoms as late as the month of June. From this period to the last of August there was a great deficiency of rain, and a severe drouth followed, attended with winds from the north-west, north, and east. Towards the close of this month there were abundant showers. September was as hot as any of the summer months. The wheat crop in many places was attacked with "*rust*," or vegetable mould, producing a diseased kernel, well known to the early settlers by the very appropriate name of "sick wheat;" and causing nausea and vomiting in those who ate of the bread made of this kind of grain. It is no doubt occasioned by the same malarious condition of the air, which produces sickness in man, as it is known to prevail most in such summers. This year the fever commenced early in July on Deer Creek, being one of the most fatal localities in the preceding season; and soon after at the other settlements, especially the "Pickaway Plains," an extensive and very rich prairie, a little south of the present town of Circleville, and as noted in its vicinity, in these early days for intermittent and remittent fevers as the "Pontine marshes." In Chillicothe the

disease commenced the beginning of August, and Dr. Harrison was one of the first attacked, as if the "Hydra" was fearful of his interference in the operations of this season. Cases of the fever were not common in the town until the middle of the month; from which time it prevailed generally until the last of October. This year, however, it was less fatal in town than in the country.

The symptoms which attended this epidemic, were similar to those which usually attend bilious remittens, and are minutely described by Dr. Harrison. It attacked all ages and sexes, but was more fatal to females than to males. Colored persons were not more exempt from attacks than the whites. The effects of the poisonous malaria, says Dr. H. were not confined to man, but also showed its sickly influence on domestic animals. Horned cattle suffered from diarrhea and bloody murrain. Horses, from "yellow water," a species of jaundice; and more than all from an ulcerated and aphthous state of the mouth, which in many instances proved fatal.

In the year 1815, many horses suffered from a similar complaint in Washington County, and especially amongst the horses attached to the army in the vicinity of Upper Sandusky this disease was very severe. I have also heard of geese and dogs, in these sickly seasons, having regular paroxysms of chill and fever—which I have myself seen.

History of the diseases of the early settlers, concluded.

At the first settlement of the country, consumption or Phthisis pulmonalis, was a disease nearly unknown to the inhabitants. The invigorating effects of constant exercise in the open air, exposure to all kinds of weather, a simple but nourishing diet, and the enlivening faculties of the mind kept constantly in play, forbade the approach of this scourge of indolence and the refinement of modern life. Very few cases occurred until after the epidemic of the year 1807, and these did not then average more than one death a year in a population of two thousand. Since the year 1815 and 1816, when Pneumonia Typhoides prevailed, consumption has been gradually increasing, and at this time the average annual amount is about three deaths in a thousand inhabitants, having increased in the course of forty years in a very rapid ratio.

Epidemic fever of 1807.—It is now more than thirty-two years since I commenced the practice of medicine in Ohio, having emigrated from the state of Massachusetts in the 1806, at the age of twenty-three years. Early in October I reached Marietta, and remained about two months. In December, settled at Belleprie, twelve miles below, and there exercised my profession through the epidemic of 1807, and returned to Marietta in March, 1808, where I have since resided.

Natural phenomena which preceded and attended the epi-

demie.—Some part of the winter which preceded the great epidemic of 1807, was remarkable for the intensity of the cold. In February, after the fall of a few inches of snow, the Ohio river was frozen across so firmly in one night, that loaded wagons crossed the next day on the ice. The summer of 1806, was dry and warm, and rendered extraordinary by the ravages of the "army worm," as it was very appropriately called by the inhabitants. It is a worm about two inches long, dark colored, smooth cuticle, with two light colored stripes running the length of the back, and is the larva of an ash colored moth, the specific name of which I do not know. Their numbers were without limit, covering the face of the earth, and moving along like an army, when changing their quarters in search of nourishment. The cereal grapes and grains were their favorite food, but their chief supplies were obtained from the leaves of the forest trees, as there were then but comparatively few cultivated spots. Some persons preserved their fields by digging ditches in the dry earth, into which they tumbled and perished by millions. Like the frogs of Egypt, they invaded and traversed through dwelling houses, and in one cabin a few miles above Marietta, actually drove out the occupants, and obliged them to take shelter under a large tree for several days. They made their appearance the last of April, and disappeared the first of June. Since then the same worm has been seen in limited districts, but not in such myriads, nor over such a wide extent of country. The spring of 1806 was very early; many peach trees were in blossom by the 25th of February, and all of them by the middle March. That of 1807 was more backward than usual, and uncommonly wet. The summer was not less so, and every fair day was preceded and followed by two or three wet ones. The heat was not greater than common, the mercury seldom rising above ninety degrees. Books and furniture were covered with mould, and every farmer lost more or less of his grain, hay, &c. from lack of sunshine to dry them. There was not less than three freshets in the Ohio river. The low lands were covered with water, and much corn and grass destroyed.

Approach of the disease.—The inhabitants, from their location on the bottoms, were generally living in the vicinity of stagnant water, and of course the larger number of them were attacked with the disease. The months of February and March were attended with catarrhal fevers of great obstinacy and severity. It was noticed that no one who had been affected with this disorder was attacked with the fever of the same summer and autumn. In April, May, and June, no particular sickness prevailed, but there were many cases of ophthalmia. A school of small children was broken up for a few days in consequence of its attacks on the scholars. This disease was much more common thirty years ago than it is now, and probable arose from a

peculiar condition of the atmosphere. By the middle of July, intermittent and remittent fevers were common. In August, scarcely a family in the township was free of the disease in some form or other. It extended both up and down the Ohio river for several hundred miles, but was chiefly confined to the alluvions and low lands; the inhabitants of the more elevated and hilly parts of the country suffering but little from the fever.

It began earlier at Gallipolis and several places below Belleprie, and was much more mortal. At Marietta the epidemic was very fatal; more than fifty dying in the course of the summer—while at Belleprie, out of nearly two hundred cases there were but four or five deaths.

The disease appeared in various grades of intensity, from that of a mild intermittent, to the worst form of bilious remittent—in some cases resembling very nearly the yellow fever of the Atlantic cities. The duration of the remitting form was from five to seventeen days, unless interrupted by medicine. It ceased with the first heavy frosts.

The Influenza visited all the western country in the autumn of the same year. It began in August, in the Atlantic states, but did not reach the Ohio till October, and passed away early in November.

At the setting in of cold weather several cases of Pneumonia typhoides occurred, very similar in type to the epidemic disease of 1815 and 16. These cases were treated successfully by stimulants and blisters.

Diseases from 1807 to 1822.—The winter following the epidemic of 1807, was mild, and the summer months were marked with no prevailing disease. From the year 1807 to 1813, the country was very healthy. The few fevers which did appear were generally typhoid, or synochal. Bilious cholics for several years after the epidemic, was a very common disorder. Phthisis pulmonalis, also became rather more frequent after the Influenza, but was still a rare occurrence. During the heats of summer cholera infantum was greatly more frequent than it is at present, and often proved fatal. It probably arose from the same malarious state of the atmosphere which produces intermitting fevers, as we find it most prevalent in regions favorable to the latter disease.

In 1810 and 1811 an epidemic Rabies appeared amongst the dogs, wolves and foxes. Many domestic animal were bitten and died of Hydrophobia. Several persons were bitten, but I do not recollect any death from this cause. One case came under my care, attended with all the usual symptoms of the disease, and was promptly arrested by the free internal use of calomel and cantharides; producing strangury and pytalism in a few hours.

In the years 1813, 14, and 15, typhus fevers were common in the summer and autumn; and but few cases of well marked

bilious intermitting, or remitting fever appearing in all the period from 1807 to 1817. Pneumonia typhoides, or "cold-plague," as it was vulgarly called, was prevalent in the eastern states in the years 1812, 13, and 14; but did not reach this country until the winter and spring of 1815 and 16. Uncommonly cold winters had preceded the disease, the debilitating effects of which were supposed to have been the predisposing cause. The winters with us being milder might have had some effect in ameliorating the attacks, as they were generally less fatal than at the east; but this, however, is mere conjecture, as the real source of all wide spreading epidemics is yet clouded in mystery.

In the winter of 1816, it proved very mortal in some parts of the country. With us it prevailed most in the highlands, and more rarely in the bottoms. The dread of this disease amongst the people was very similar to that felt a few years since on the introduction of the cholera, and attended with the same diversity of opinion as to its contagious or non-contagious character. Even the name, "*cold-plague*," struck a chill to the heart. Aided by the experience of the eastern physicians, and the pathology of the epidemic being better known, a large proportion of the cases were under the control of medicine. It was most fatal amongst our soldiers on the frontiers, during the late war, and in many localities truly merited the name of "Plague." From the year 1817 to 1820 no general disease prevailed. The fevers of summer were commonly synochal, or of a sub-typhoid type, and during winter, inflammatory.

Epidemics of 1822 and 1823.—We now approach the period of the great epidemic fever which prevailed in the valley of the Ohio, from the year 1821 to 1824; but was most rife with us in the years 1822 and 1823. The summer of 1821 was very sickly in some portions of the country, especially at Louisville, Ky. so that there seemed to be a change taking place in the constitution of the atmosphere, preparatory to the great epidemic which followed.

These fatal seasons will long be remembered in the annals of this portion of Ohio, as the most disastrous of any since its first settlement.

Natural Phenomena which preceded or attended the epidemic.—The years 1820 and 1821 were distinguished by unusual drouth; the summers hot, and little or no thunder or brisk gales of wind to purify the atmosphere. The rivers and creeks were low, and in the summer and autumn of 1822 the Ohio was lower than ever before seen by the oldest inhabitants. The water in the latter stream was nearly stagnant, excepting at the heads of the islands resembling a long lake more than a river, and bearing on its surface numerous patches of a mucons scum or froth. The shores and shallows were lined with aquatic plants and grasses for many rods in width, as early as the fore

part of June, whereas in common seasons they do not appear sooner than August or September, and coated with a green vegetable matter, *Lemna minor*, which as the water gradually subsided, or the winds forced it on the shore, remained on the beach exposed to the sun. These manufactories of poisonous gases, together with the stagnant waters, exhaled a noisome smell, which was noticed by the inhabitants, especially in the morning and evening, and at all times of the day by persons living on the uplands, beyond the immediate influence of the miasm, who came to the banks of the river on business, or to visit their sick friends; the course of the wind for four months, was, with little variation, from the south and southwest—all which, combined with the previous epidemic constitution of the air, must have aided in producing the sickness. The unremitting warmth and aridity of the weather, proved wonderfully favorable to the production of insect life, especially so to the caterpillar families. Every wild cherry tree, black and white walnut, with various other trees, were so much stripped of their foliage, and so covered with the webs of the insects, as to change their usual verdant appearance to that of grey or white.

Many other genera of insects also abounded. The grasshopper, *gryllus telligonia*, in many districts was so numerous as to destroy whole fields of oats and grass in the course of two or three days; rising in clouds when disturbed, and making a rustling with their wings, which afforded a striking resemblance to the locust of the eastern continent.

The potato-fly, *cantharis vittata*, was generated in such multitudes that a pint cup full could be gathered from a single hill of potatoes; and many pounds were collected, and used with as much vesicating effect as the best officinal *cantharides*. In common seasons they are rather a rare insect in this region of country, and have not appeared in any quantity since that time.

Animalcula, peculiar to the human family, were generated in a wonderful manner; and an acquaintance of mine, of cleanly habits, who wore a flannel vest next his skin for a few days longer than usual without changing it, was much confounded and chagrined to find it thickly inhabited with lice.

In September the country was overrun with myriads of grey squirrels. They traveled in armies, and destroyed many fields of Indian corn, especially in the newer clearings, bordered with trees. Their course of travel was from the north to the south. No obstacle checked their progress; passing through or over dwelling houses, and crossing the Ohio river by swimming. Its low stage was favorable for this purpose. It is remarkable that the same migrating propensity was upon them in the epidemic autumn of the year 1807. It has been noticed as early as the days of Hippocrates, that great and extensive epidemics are often attended with other unusual and remarkable phenomena, which

either precede as harbingers, or accompany the progress of the disease. Many curious facts of this kind have been collected by the learned Noah Webster in his laborious and unique work on "Pestilence."

Commencement and progress of the epidemic in 1822.—The first cases appeared the latter part of June. They were generally typhoid, and attended with signs of malignity, such as petechia and glandular swellings, most generally of the parotids. If suppuration took place, the patient generally recovered; if otherwise, the disease was usually fatal.

The fore part of July was damp and cool, soon after which the fever put on the remitting form, and no more petechial cases occurred. By the first of August the epidemic was general in this portion of the valley, and especially in Marietta. The largest number of attacks was in September, and at one time there was not less than four hundred cases within the area of one square mile. They were composed of all, from the mild intermittent to the most malignant remittent, with the usual symptoms which attend the yellow fever. During the season I had about six hundred patients under my care. For four months in succession, I ate but two meals a day, and spent from sixteen to eighteen hours out of every twenty-four in attending on the sick. Through a merciful Providence my own health was good, and the only suffering was from exhaustion and fatigue through the whole of this disastrous season. The proportion of deaths was about six in every hundred cases, where proper medical attention was given to the sick; but so general was the disease that many lives were lost from a lack of nurses. All other disorders were swallowed up by this. It did not sensibly abate until after smart frosts appeared in November. Intermittents were common through the winter months.

Symptoms peculiar to the epidemic of 1822. The general features of the disease were such as are common to bilious remittents in other parts of the world; but it possessed others which were peculiar to that of this year. Amongst these was involuntary and deep sighing. It was so general that you rarely approached a patient who was very sick, and asked any question, who did not, before he answered, draw one or two profound sighs. This symptom denoted congestion, and is usually a mark of danger, although they generally recovered in whom it appeared. Yellowness of the eyes and skin, first appearing on the forehead and neck; from whence it gradually spread over the whole body. A cold, clammy state of the surface, and especially of the lower extremities, when at the same time the patient complained of uncomfortable heat, and begged to be bathed in cold water. In many of the fatal cases, coma attended for thirty or forty hours before death. All ages were attacked, but it was seldom fatal to children under four years old. More

Deaths took place on the fourth, seventh and ninth days, than at later periods, as the disease had then spent its force, and was under the control of medicine.

Character and progress of the epidemic in the year 1823.—The fore part of the winter of 1823 was very wet, but the weather was mild, and the inhabitants generally healthy. The spring months were pleasant, with no unusual indications of a sickly season. But in June the fever again broke out and pervaded nearly all parts of the country in the course of the summer. It was not now, as in the past year, chiefly confined to the vicinity of the water courses and rich alluvions, but infested the uplands equally with the valleys. Even some districts within the ranges of the Alleghany mountains were visited with intermitting and remitting fevers. East of the Alleghanys, in Pennsylvania, it was very prevalent in many places not only in 1823, but also in 1824.

The country along the valley of the Ohio river, was deluged with rain, in June and July, attended with very little thunder and no strong winds. It rained on fifteen days in the month of July, and in the course of these two months there fell fifteen inches of water. All the low grounds and hollows were filled with it, and exhaled noxious and fetid vapors; in many places so disgusting to the smell, that persons in passing over or near them involuntarily put their hands to their noses, and made all haste beyond their influence. With a light moderate breeze passing from the low lands to the hills, the same sickly vapor could be smelt a long distance from its source. Even the flat lands on the hills, if covered with a coat of grass, exhaled the same nauseous gases. It was noticed by observing farmers, that in plowing the corn lands, the earth, instead of the pleasant odor which arises from fresh plowed soils, sent forth a disgusting smell. The surface of the ground seemed to be in a putrid state, from the lack of sunshine to dry and sweeten it. Many fields of Indian corn were damaged by the excessive wet state of the low grounds, and much wheat was lost after passing through the hands of the reaper. Grass suffered in the same way. The last of August the rains ceased, and the weather was more dry the residue of the season; but this change had no influence in checking the progress of the epidemic.

In the months of September and October, dysenterys were common, and often alternated with intermittent fever in the same subject. In other portions of the country, on the hills, dysentery appeared as an idiopathic disease.

The fever of this year was of a similar character with that of 1822, but bore evacuants better, so much so that bleeding was decidedly advantageous in a great many cases. In proportion to the number attacked, the disease was more fatal in the country than in the town, especially amongst those living in the

wide rich bottoms lands on the Ohio river. This was doubtless occasioned by the stagnant water around them, and the luxuriant growth of weeds which clothed their farms from the lack of able bodied persons to till them—thereby obstructing the circulation of the air, and by their decay filling it with noxious gases. Never did the eye behold such an enormous growth of weeds as had taken possession of the rich lands, rising in some fields to the height of fifteen feet. “The earth brought forth by handfuls,” in every spot not drowned by the rains. The orchards were loaded with fruit, and the woodlands with all kinds of nuts and acorns. The fields were burthened with grain and grass, and unchecked by the weeds the Indian corn raised aloft its spiry head and produced an abundant crop—in many instances without any further aid from man than only once plowing and planting. Had not an overruling and kind Providence interposed, famine must have followed the sickness, as is common in other countries, for there were not well people enough to take care of the sick, much less to attend to the cultivation of their farms.

Some estimate may be formed of the condition of the country, when it is stated that at the election for state officers, the county of Washington gave but three hundred and ninety votes, in place of the twelve or fifteen hundred usually polled.

Instead of the storms of rain incident to the equinox, the wind was from the north, the weather fair and cool, and the nights of the twentieth, twenty-first, and twenty-second of September, accompanied by a smart white frost, sufficient to produce ice of the thickness of window glass. So far from checking the epidemic, the attacks were more frequent after this cool temperature, and not less malignant. The disease was not subdued until the setting in of hard frosts the beginning of November. After this period no new cases of remittent appeared; but intermittents and some cases of dysentery continued to harass the people for some weeks, as if the “malarious hydra” was loath to quit the territory over which he had so long reigned.

Treatment of diseases in Ohio 30 years ago, and especially the epidemic of 1822 and 1823.—The epidemic fever of the year 1807, was of a more inflammatory type than that of 1822 and 1823, and bore free evacuations better, especially that of bleeding. Our doses of calomel at that period were small; five grains was a medium dose, combined with twenty grains of jalap for a cathartic. This quantity generally produced the desired effect, and was found to be one of the most useful purges. Our febrifuge powders were composed of nitrate of potash, with some preparation of antimony, generally the tartrate. The “neutral mixture” was also considerably used; but a favorite medicine, especially in fevers of a malignant type, was a solution of the sub-carbonate of soda. It had come into favor un-

der the auspices of Dr. Samuel Mitchell of New-York, the senior editor of the Medical Repository, a work of much merit for that day. His theory was, that malignant fevers were caused or greatly aggravated by the generation of septic, or nitrous acid in the stomach and bowels, which by a free use of alkalies, was neutralised and the fever rendered mild and more manageable. Whether the septic acid or acid of putrefaction is more or less abundant in fevers I do not know, but of this I am certain, that in the fever of 1807 alkalies proved to be one of our most useful and salutary remedies, and was also equally beneficial in the epidemic of 1822 and 1823. It was used not only internally, but in bad cases externally, combined with spirit and water, to which we sometimes added the capsules of the red pepper. By keeping the patient wrapped in a sheet, thoroughly soaked with this solution, I have seen some of the most malignant cases of fever arrested and cured with little or no internal means except a cathartic. It seemed to neutralise and destroy the fomites and seeds of the disease. As a tonic, Peruvian bark, in substance, mingled with a decoction of *Radix serpentaria virg.* was our chief reliance—sulphate of quinine and its numerous relatives were not known in Ohio, until the period of the close of the second epidemic in 1823. In the malignant cases of that period, in addition to other remedies, was added that of yeast, and charcoal in fine powder. It was a most admirable medicine where it could be swallowed in sufficient quantities and was nicely prepared. With this simple compound which every cabin could furnish, I have seen the worst cases of fever subdued in thirty-six, or eight and forty hours; our main hope, however was placed on the curative action of mercury, in its various forms, especially the sub-muriate. If the specific effects of this wonderful medicine could be brought to act on the liver and secretory tissues, the patient was safe; and this could in most of the cases be effected if he could bear bleeding. In some, however no such action could be produced, and the disease was then generally fatal. For subduing intermittents, "Fowler's solution," was equal to any other remedy.

Epidemics from the year 1824 to 1838.—From the year 1824 to 1826 no general disease prevailed. A few cases of measles and scarlatina appeared in 1824 and 1825. In February, 1826, the influenza passed over this part of Ohio, on its way westward. It began east of the mountains some weeks earlier. The attacks were less general in the country than in cities. In New-York it was estimated that there were not less than twenty thousand persons sick with this disease at one time. I knew of no fatal case with us, though some of them were very severe, as was experienced in my own person. It differed in some of the symptoms from that of 1807; there was less affection of the lungs, and more of the frontal sinuses and head. From this pe-

mod to 1832, no general disease prevailed. Early in that year the people began to be alarmed with the accounts from Europe of the ravages of the Asiatic Cholera, which occupied all the newspapers; and it made its appearance on the N. E. coast of America about the last of May, and spread with fatal rapidity along the great water courses which border the northern side of the United States. At Quebec and Montreal its mortality was frightful in June and July. It seemed this year to follow the course of the great lakes, in about the same parallel in which it crossed the Atlantic, and by September had reached some of our military outposts on the upper Mississippi. A lateral branch from the malarious column seems to have been thrown off southerly, and passed down the waters of the Hudson river to Albany and New-York, where it appeared early in July. With us no cases occurred this year, but a few appeared late in the season at Cincinnati, and two or three persons were buried on an island in the Ohio river near Marietta, who had been attacked with the disease and died on their passage up, on board a steam boat. Either from a nervous dread of the disease, or some morbid constitution of the atmosphere, a large majority of the inhabitants this summer were troubled with bowel complaints, generally a moderate diarrhea. In some it was attended with severe pain and constipation like a cholera. No disease which ever visited the civilized world held such control over the nervous system and moral faculties of man; and during the period when the great mass of our citizens believed it to be contagious, I have no doubt that one half of its victims took the disease, and actually died from the depressing effects of despair and fear. I know one individual, in whom from the first, the greatest horror was awakened at the bare name of the disease, and who was attacked with a diarrhea while it was raging in Montreal. It continued to follow him through the two succeeding seasons, and he has only been free from the disease since the cholera has left the country. Had it prevailed with us as it did in many other places, he would have been one of its earliest victims, but happily it did not. The same man was sick in 1822 and '23 with the prevailing epidemic, and was cured as much by the stimulus of hope, and the confident assurances of his recovery by the physician, as by the medicine administered. The same salutary effect was often produced by the specifics and nostrums vended during the cholera. The full confidence reposed in the remedy, from the printed certificates which accompanied it, often doing more in curing the patient than the medicine itself. In 1833 and 1834 this epidemic scourge still continued to visit our most populous towns and cities in the west, while the sparse and thinly settled portions of the country scarcely felt its effects; as if the appetite of the demon could only be satisfied with a multitude of victims, crowded into a small compass, and a

short space of time. Those places and localities the most favorable to malarious diseases, seem generally to have suffered the most severely from its visits, showing that the same laws which govern other epidemics, also governed this, and as *a priori*, we should be led to anticipate. I think it was found that the cleanly and well ventilated portions of our cities suffered the least, and the filthy and ill-aired the most. Since the year 1835 but few cases of cholera have been seen, although it is probable that in the hot and wet portions of the summer, sporadic cases may for some years occasionally appear. During its continuance in the country, even in districts where no cases of cholera appeared, it was observed in treating our summer fevers, that the greatest caution was needed in the use of cathartics, as even moderate doses often produced very drastic effects. This peculiar irritability of the bowels, showed the vast and overpowering influence of the "choleric malaria," in its controlling effects on other diseases, as is always the fact in great epidemics. Another evidence of its being governed by the same laws as malarious diseases, is the fact of its ceasing to prevail in any district, soon after the setting in of hard frosts. This was the fact in America, although it is said to have been very fatal in Russia during some of the winter months, soon after its first introduction into that country.

Diseases common to this climate, with the modifications which have taken place from the effects of epidemics, diet, fashions, &c.

Immediately after, and for a few years subsequent to the epidemic of 1822 and 23, enlarged spleens, diseased livers, and dyspepsia were far more common complaints than previous to that time, and often in persons who had escaped an attack of the fever; thereby indicating that the seeds of the epidemic had pervaded the system of every one, showing it in the subsequent effects. Dropsys have also been of more frequent occurrence. Measles and scarlatina have generally prevailed at intervals of eight and ten years, but have been more rife in 1838, than at any other period. Whooping-cough is a more frequent visiter, and may be expected every four or five years. While speaking of this disease, which is often the "opprobrium medicini," I cannot forbear noticing a very old fashioned remedy which has been far more successful in my hands than any or all the new ones. It may be because I am partial to old fashions. This medicine is the sulphuret of potash, given in honey, three times a day, in five or twenty grain doses, according to the age, after suitable evacuants. It seldom fails to cure in ten or twelve days. Bilious cholics are more rare than formerly. Calculous affections are not common in this portion of the state. Apoplexies and palsys are of infrequent occurrence, and more especially so, since the use of alcoholic drinks have gone out of fashion as a

common beverage. In the winter and spring months, cynanched trachealis, is a frequent disease amongst children. Rheumatism is not very common; but Pneumonia and Pleuritis are the most frequent diseases in the winter and spring months, which doubtless arises from the great and sudden changes of temperature peculiar to this climate. We can hope for no alleviation in these diseases, but from greater attention to our own persons, by accommodating our dress to the weather. Verminous diseases and cholera infantum are less frequent than formerly, and may in part be attributed to a more suitable diet and comfortable clothing, but chiefly to a more healthy condition of the atmosphere. The early decay of the human teeth, is a complaint often heard, and is well worth the attention of the medical faculty, to learn the cause and point out a remedy. Puerperal fevers are less frequent in the country than in crowded cities. I have seen but a very few cases in the course of my medical life. The "milk sickness," so much dreaded by the early settlers on the waters of the Miami, and the country between that and the Scioto, has never been known as a disease in the hilly regions east of the latter river. In the year 1807, there was some indication of this disease along the Ohio river, at Belleprie and vicinity, and many people believed that the milk used at their meals, during the epidemic fever, made them sick. Some of the cheese made on a large dairy farm, occasioned vomiting in every one who ate of it. In 1822 and 23, the same fault was found with the milk in several places; but it passed away with the prevailing epidemic, and has not been noticed since. From these simple facts I am led to adopt the theory that malaria is the cause of this deleterious quality in the flesh and milk of domestic animals, and not any poisonous plants. Nervous complaints and consumptions have increased many fold, within thirty years, and have chiefly arisen from the more luxurious and sedentary habits of the people, especially our females. The low price of factory cottons and cloths having banished the distaff, spinning wheel and loom from our houses, has without doubt largely contributed to this result. Formerly the greater portion of our clothing was made within our own dwellings, and the music of the spinning wheel, accompanied by the cheerful female voice, instead of the piano, could be heard in every house. The latter may please the ear for a moment, but no permanent result remains; while with the music of the wheel we have rosy health, vigorous and active frames, and garments to clothe the beloved ones of our own households, as well as the needy poor. It is sadly apparent that with the passing away of our domestic manufactures, there also departed a large share of the health, and much of the happiness of our females.

Closing remarks—the pleasures and privations of physicians.

In bringing this long address to a close, I cannot but congratulate the junior portion of the profession and those who are to come after us, on the vast improvements which have been made in our roads and bridges, so greatly to the comfort of the country physician. Thirty years ago, such a convenience as a bridge was hardly known in the State. The streams and creeks were forded; and when high, crossed by swimming. The roads between the new settlements were mere bridle paths, and often indicated only by *blazes* on the trees. Our rides were long, as well as rough, often extending to thirty and forty miles. I well remember that one of the first calls I had, after coming to Ohio, was to visit a patient in Virginia thirty two miles from Marietta. The journey was performed chiefly in the night, by the assistance of a guide, through a dense forest, we passed but one or two clearings after leaving the Ohio river. The patient was very ill with an ascites and an anasarea. His friends had started to bring him to Marietta, for medical aid, but his strength failed on the way. I reached the miserable cabin in which he lay about midnight, and found him in articulo mortis. He died in a few minutes after. There being no chance for sleep, and a clear star-light night, the last of October, I mounted my horse and commenced my solitary ride home. It being the season for wild game, many deer had recently been killed by the hunters near the side of the path. This had enticed an unusual number of wolves, into that vicinity, to feed on the offal, and my ears were every few moments assailed by the howl of the wolf, or the sharp yell of the panther, within a short distance of the road. For defence I had nothing with me, but a stout riding whip, with a long lash which was occasionally cracked to enliven my weary horse and to keep up the excitement of my own ~~very~~ spirits. No violence however was offered by the wolves, and by day-light I had reached the first cabin, a distance of sixteen miles, with a fine appetite for breakfast, on venison steak, a common dish at that day in every log hut. The remaining portion of the ride was performed by the light of the sun, and without further adventure. As a sample of the hardships which attended the practice of medicine in Ohio, thirty-five years since, I will mention the name of one of my earliest and most intimate friends, Doctor John Baptiste Regnier, who commenced the practice of medicine, three years before I came to Ohio, in a new settlement, ten miles from Marietta. It was a hilly, broken country, on the waters of Duck creek, entirely destitute of roads. Being then poor, with a small family to maintain, he was unable to purchase a horse, but carried on an extensive business on foot. Possessed of a buoyant spirit, with a young and active frame, journeys of ten or fifteen miles were performed with as much rapidity as is usually done on horse-back. This mode was continued for one or two years until he was able to own a horse

without running in debt for it. Strange as it may seem, I have often heard him say in after and more prosperous days, that he looked back to this period as one of the happiest portions of his life. He soon acquired a large practice, moved into Marietta and was the most intelligent, popular and successful physician in that portion of Ohio. Although born and educated in Paris, he was blessed with a disposition that accommodated itself to any and every situation in life. To manners the most bland and affable, was united a kind and benevolent heart, to which selfishness, that bane of charity, was a stranger. With such feelings and accomplishments, no young man can fail of success in the practice of medicine.

Whoever pursues the healing art, with any desire of eminence, must, like the Knights Templars of old, be a sworn and devoted friend to his profession, or he will prove a recreant. He is no longer master of his own time, nor of his own person, but his time and himself are at the call of another. If just seated at the table to enjoy the pleasures of social intercourse with his friends, or has placed his head on the pillow, after the weariness and watchings of two or three successive nights, and in the midst of a refreshing sleep, he is liable to be called at a moment's warning from the enjoyments necessary even to animal existence. The constant anxiety which attends the mind of a feeling man, when loaded with the responsibility of several valuable lives, as is often the case in sickly seasons, is one of great weight, and also assists in shortening the life of the physician. The regret and mortification which follows his unsuccessful cases, and the wisest must have more or less of them, even when he cannot look back to any error of prescription or practice, adds another bitter item to the long catalogue of his troubles. The want of regularity in his meals and his sleep, with the incessant fatigue attendant on his duties, have placed longevity of the physicians the shortest in the list of the learned professions by about ten years. The life of a physician, is in, many respects, as my friend Regnier, once said, when greatly vexed at the complaints and ingratitude of a patient, "a dogs life any how", and yet the most of us would be very unwilling to change it for that of any other. But let us glance at our vocation in a more favorable light. Although the life of the physician is surrounded by so many trials and privations, it is still also, accompanied with many pleasures and consolations. Who would exchange for money, the grateful glance, the confiding aspect of the distressed; or the unlimited confidence placed in the opinion of the physician by the friends of the sick. His looks, his motions, are watched with the greatest anxiety, as if on them hung the fate of the patient. The responses of no ancient oracle were ever more implicitly believed by its votaries, than those of "the old and well tried doctor," within the circle of his practice. Life

or death, often truly hang upon his lips; and many a patient whom his despairing friends had consigned to the grave, has been rescued by the inspiring hope, infused by the confident assertion of the physician. In several diseases, hope is one of the most potent remedies, and wisely was it placed at the bottom of Pandora's box, as a specific for numberless ills. If the country physician has many trials and privations, he has also numerous sources of enjoyment. In his solitary rides, he is not alone, but the voice and the smiling face of nature salute him on every side. During the spring, as he traverses the woodlands and prairies, he can collect for his herbarium, the choicest gifts of *Flora*, and select such medicinal plants as will be useful in diseases. In the summer, endless species of insects, offering the most charming specimens for his entomological collection, cluster around him and beset his path on every side. Many of the most rare and beautiful in my cabinet, were gathered in my country rides. Has he a taste for conchology, various species of land shells are strewn along the way; and in every rivalet he crosses, the open valves of the muscle, with its rich tints and pearly luster, invites him to choose its most valued varieties. In autumn the hill sides and the beds of streams, offer continual subjects to exercise his skill in geology; and during the clear frosty nights of winter, the sparkling stars and heavenly constellations, afford the sublimest views for his contemplation. But above all, the pleasing thought that he has been the blessed means of rescuing a father, a mother, or a child, of some distressed family from the grasp of death, must ever remain his richest compensation; to be prized far above gold, however necessary it may be to our wants, and is his best if not often his only reward, for many a long and weary ride, and many a sleepless night.

Gentlemen, accept my thanks for your patient attention, and my best wishes for your individual welfare; and that you may long continue to enjoy, annual and happy repetitions, of the Ohio Medical Convention.

